Abstract

Process for preparing high-concentration gaseous formaldehyde having a molar CH_2O : H_2O ratio of ≥ 0.6 from an aqueous formaldehyde solution by evaporation of at least part of the solution, in which the aqueous formaldehyde solution is heated to a vaporization temperature T and the gas phase formed is taken off, wherein the evaporation temperature T obeys the relationship:

$$T \, [°C] \geq T'_{min} \, [°C]$$

where $T'_{min}(c) = A + B \times (c/100) + C \times (c/100)^2 + D \times (c/100)^3$
and
$A = + 68.759, B = + 124.77, C = - 12.851, D = - 10.095,$

where c is the instantaneous CH_2O content of the aqueous formaldehyde solution during the evaporation in percent by weight and is from 20 to 99% by weight.